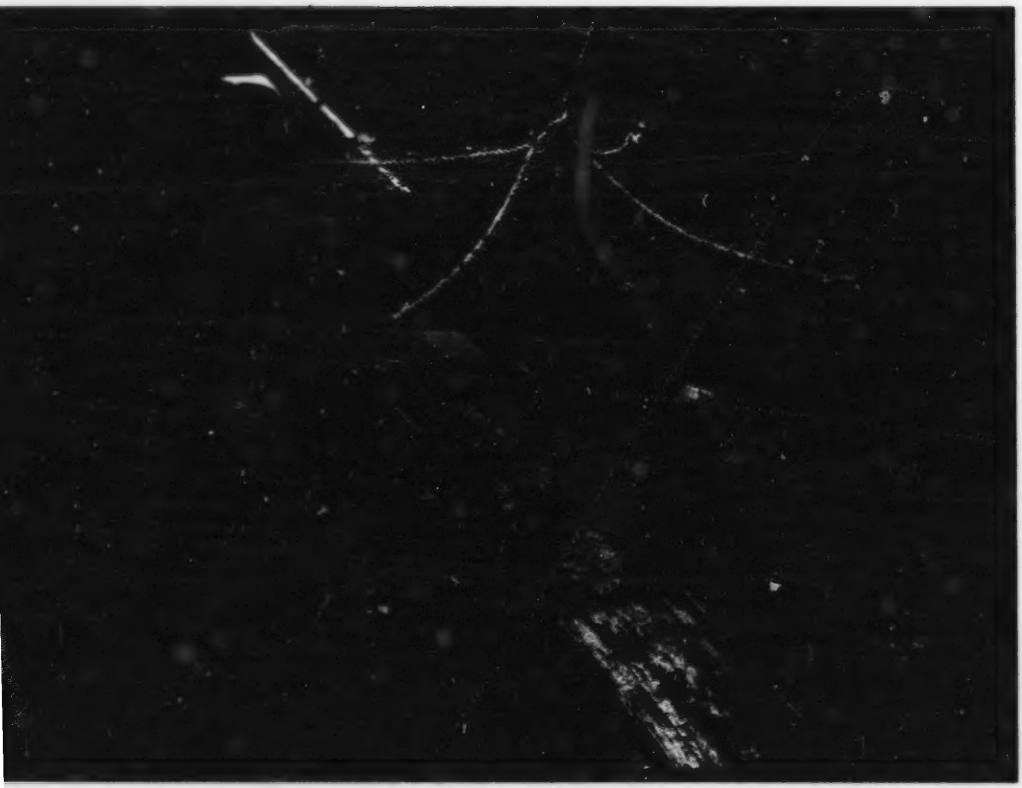
Annual Report

Department of Fisheries

Prince Edward Island

for the year ended December 31st

1986



HARVESTING SNOW CRAB OFF NORTH SHORE OF P.E.I.

87-03476/

TO HIS HONOUR

THE HONOURABLE LLOYD MACPHAIL,

Lieutenant Governor of the Province of Prince Edward Island

May It Please Your Honour:

I have the honour to submit herewith the Report of the Department of Fisheries for the period ended December 31, 1986.

I have the honour to be, Sir.

Your obedient servant,

HONOURABLE JOHNNY ROSS YOUNG
Minister

TO THE HONOURABLE JOHNNY ROSS YOUNG
MINISTER OF FISHERIES
Charlottetown, P.E.I.

Sir:

I have the honour to submit herewith the Report of the Prince Edward Island Department of Fisheries for the period ended December 31, 1986.

Respectfully submitted,

H. Douglas Johnston
Deputy Minister

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FOREWORD

ANNUAL REPORT

The P.E.I. fishery makes a significant contribution to the Island economy, estimated at $160 million in 1986 and employment in the fishery accounts for almost 10% of our workforce. It is estimated that the total direct and indirect contribution of the fishing industry to our Gross Domestic Product is as high as 10% and exports of fishery products can account for almost 40% of total P.E.I. international exports. These impressive statistics are obtained through the efforts of our world class fishermen and processors. Whether you consider the leadership shown by our industry in blue mussel production or the quality consciousness of our fishermen and processors which allow them to compete in the world market place, the P.E.I. fishing industry is to be congratulated for its initiative, ingenuity and dedication in improving economic returns which benefit all Islanders.

1986 was an excellent year for the P.E.I. fishery with overall landings increasing 5.5% over 1985 and the total landed value of fishery products reaching a level of $67.2 million, a substantial increase of 29.5% over 1985. The major contributor to the increased performance was the lobster fishery which produced record landings of 18.3 million lbs. and a record value of $44.5 million.

The Province continued to make progress toward establishing a viable, long term snow crab fishery during 1986. P.E.I. was granted 16 exploratory crab permits in 1985, after an absence from the fishery for many years, and the success of that fishery prompted the Minister of Fisheries and Oceans to grant an additional 14 exploratory permits in 1986. Landings by the 30 fishermen involved in the snow crab fishery in 1986 amounted to almost three million pounds. This represents an important addition to our resource base and the productivity in the exploratory phase should ensure the Province's long term future in this fishery.

During the past year the Department's major focus on groundfish quality enhancement continued to produce positive results. The province-wide voluntary dockside grading program successfully introduced in 1985 again saw fishermen achieve high percentages of Grade "A" groundfish.

Our groundfish sector, as others in Atlantic Canada, enjoyed the benefits of a buoyant market during 1986. Our position in that market was further strengthened as a result of quality programing as can be evidenced by the fact that the value of landings was up by 15% over 1985 while landings dropped by 12%.

Both industry and government have been concerned by the high incidence of small groundfish, particularly cod, reported in catches in recent years. Our Department, through the resource monitoring program, has gathered and compiled data on groundfish

size and age distribution from the various gear sectors in recent years and that information strongly supported the need to move on this issue. P.E.I. has played a leading role in advocating measures to address the problem and in December, Atlantic Fisheries Ministers and the Minister of Fisheries and Oceans reached agreement that the Department of Fisheries and Oceans would introduce regulations on an Atlantic wide basis on minimum size limits for cod in 1987. It is hoped that this measure and increased monitoring of catches will help alleviate this problem and assist in providing security for future groundfish stocks.

Aquaculture continued to gain prominence as an important component of the P.E.I. fishery in 1986. Oyster production continued to increase and the highly successful blue mussel culture operations more than doubled production.

The Federal and Provincial Fisheries Ministers were mandated at the First Ministers Conference held in Vancouver in November,1985, to study challenges and opportunities facing the Canadian fishery. In a series of meetings culminating in the First Ministers Conference held in Vancouver, Fisheries Ministers agreed on future strategies in the areas of trade, income stability, resource considerations and fisheries development. P.E.I. assumed an active role in this process and decisions reached should help shape our future fishery.

Late in 1986, a new Departmental organization was formalized to provide better service to the fishing industry and in an effort to ensure the interests of the industry are well represented in the context of the Atlantic Fishery.

Also, during the latter part of the year, the Department reviewed its goals and objectives and identified new opportunities for the P.E.I. fishery. This planning exercise has provided a course of action for continued development of our Island fishery. Opportunities for development which have been identified include diversification in species utilization, aquaculture development, quality improvement, increased value added production and market development.

I want to conclude by expressing my thanks to the various sectors of the fishing industry for their input, guidance and support during the past year. As well, I offer my sincere thanks to Minister Young for his leadership and direction and to the staff of the P.E.I. Department of Fisheries for their hard work and dedication in 1986

H. Douglas Johnston
Deputy Minister

DEPARTMENT OF FISHERIES

ADMINISTRATION

The approved budget for the Department of Fisheries for the fiscal year, April 1, 1985 to March 31, 1986 was $2,106,300. Total expenditure was $2,895,531.79.

Special warrants were issued as follows:

Defence Fund - Canadian Fishing Industry	$ 25,000
P.E.I. Lending Authority	71,000
Loan Guarantee Write-Off	48,600
* Purchase Herring Barrels	400,000
Diesel Engine Conversion Program	137,500
Vessel Conversion	43,425
Seaweed Market Stabilization	250,000

Total Revenue for the 1985-1986 fiscal year was $375,731.

The programs of the Department were carried out by fifteen full time staff during 1986. In addition to full time staff, there were eighteen seasonal employees on staff during May to October. Late in 1986 a new Departmental organization was formalized (See Appendix 3 for Organizational Chart).

A detailed expenditure report of the department for fiscal year 1985/86 follows:

* NOTE: Offsetting revenue of $309,872 was received from sale of herring barrels.

REPORT OF DEPARTMENT EXPENDITURES
April 1, 1985 - March 31, 1986

Expenditures	Original Estimate	Special Warrants	Actual Expenditure
FISHERIES ADMINISTRATION			
Salaries	115,400		122,258.93
Administration	1,600		1,582.66
Materials/Supplies	2,600		1,808.52
Professional Services	65,000	25,000	61,087.93
Travel	11,800		11,524.67
TOTAL	196,400	25,000	198,262.71
EXTENSION			
Salaries	244,900		204,452.04
Administration	1,000		6,386.82
Materials/Supplies	169,100		170,916.32
Professional Services	19,300		16,130.98
Travel	43,800		41,128.60
Aquaculture Incentive	15,000		12,279.87
Fishermen's Quality Enhancement	150,000		224,746.97
Malpeque Oyster Cultures Inc.	1,000		1,086.74
P.E.I. Fishermen's Ass'n.	30,000		30,000.00
P.E.I. Seafood Processors	9,900		9,900.00
Travel Grant for Fishermen	10,600		10,526.07
Baitshed Program	18,000		18,000.00
Grant-P.E.I. Lending Authority		71,000	70,680.28
Loan Guarantee Write-Off		48,600	48,536.96
TOTAL	712,600	119,600	864,771.65
PRODUCTION-MARKETING			
Salaries	171,300		164,438.20
Materials/Supplies	56,700	400,000	396,342.13
Professional Services	115,000		27,941.03
Travel	26,100		28,191.61
Commercial Fishermen's Investment Incentive	141,000		122,720.58
Nearshore Vessel Program	175,000		156,454.50

Expenditures	Original Estimate	Special Warrants	Actual Expenditure
PRODUCTION-MARKETING (Cont'd.)			
Fresh Fish Market Assistance	35,000		20,295.65
Diesel Engine Conversion Program	101,000	137,500	238,260.24
Vessel Conversion		43,425	34,915.85
Product Utilization Grant			78,635.27
TOTAL	821,100	580,925	1,268,195.06
PROCESSING & QUALITY			
Salaries	126,100		113,230.81
Equipment	5,200		4,122.45
Materials/Supplies	32,100		28,494.88
Professional Services	45,800		57,657.70
Travel	22,000		21,777.67
Processors Incentive	95,000		75,000.10
Special Projects	50,000		50,000.00
TOTAL	376,200		350,283.61
SEAWEED MARKET STABILIZATION			
Materials/Supplies		250,000	214,018.76
TOTAL		250,000	214,018.76
DEPARTMENT TOTALS	**2,106,300**	**975,525**	**2,895,531.79**

REVENUE

April 1, 1985 - March 31, 1986

FISHERIES ADMINISTRATION		
Fishbox Pool,Training Revenue	11,200	
Sales-Fishboxes & Misc.	5,879	17,079
EXTENSION		
Aquaculture Incentive Program	29,054	
Sales - Water System Charges and Misc.	6,195	35,249
PRODUCTION - MARKETING		
Fees and Services	1,982	
Sales - Herring Barrels	309,872	311,853
PROCESSING & QUALITY		
Licenses and Permits	5,175	5,175
SEAWEED MARKET STABILIZATION		
Sales Dried Moss	6,375	6,375
TOTAL DEPARTMENT REVENUE		375,731

PRINCE EDWARD ISLAND FISHERIES

The year 1986 has been relatively stable in most areas of the P.E.I. fishery with landings increasing by 6,525,435 lbs. over the 1985 recorded figure. Preliminary figures show 1986 landings of 126,034,129 lbs. The total landed value of all fishery products reached $67.2 million, an increase of 29.5% over the 1985 value.

The industry presently employs 5,700 people, approximately 3,700 in fishing and 2,000 in processing. Many more are employed in industries which support the fishery such as outfitting and vessel construction. It is estimated that in excess of $160 million is contributed annually to the P.E.I. economy from the primary and secondary fisheries sectors and support industries.

Total groundfish landings in 1986 decreased to 30.1 million lbs. representing a 12.1% decrease from 1985. The value, however, increased by 15.8% raising the value to $5.6 million. With respect to the dominant groundfish species, increases have been recorded in redfish, while decreases have occurred in landings of cod, hake, and flounder. Redfish landings increased by 7.8% raising the landings from 9.3 million lbs. in 1985 to 10.1 million lbs. in 1986. The value of these landings increased by 15.0% , showing a landed value of $1.2 million. Flounder and cod landings showed the greatest decline with a decrease of 23.7% and 19.5% respectively. Hake landings decreased, as well, by 5.4%. Although landings decreased in cod and hake, their values have increased. Values of cod and hake increased by 43.8% and 6.4% respectively.

Landings of pelagic and estuarial fish increased to 33.3million pounds, up from 20.3 million pounds in 1985, showing a 64.1% increase. The value of these landings increased by 29.9% to give a value of $4.7 million. Mackerel and Herring, landings and values, increased significantly by 116.3% and 58.9% respectively. Eel landings increased from 354,228 lbs. in 1985 to 379,065 lbs. in 1986. Smelt landings increased 34.8% up from 824,521 lbs. in 1985 to 1,111,712 lbs. in 1986. Landings of gaspereaux and silversides decreased by 39.5% and 83.0% respectively. Tuna landings dropped by 68.1% with a recorded landing of 72,811 lbs.

Total mollusc and crustacean landings increased by 18.3% raising the landings by 4.8 million lbs. to reach 31,435,071 lbs. The value of these landings increased by 34.0% from $40.9 million in 1985 to $54.8 million in 1986. The lobster fishery, once again, showed improvements this year with an increase in landings of 22.8% and an increase of 32.5% in value to reach a record of $44.5 million. Mussel and scallop landings showed significant increases of 162.7% and 37.1% respectively. Snow crab landings increased by 17.7% and as well, their value increased by 71.2% compared to 1985 figures. Oyster landings showed a slight improvement of 8.9% raising landings in 1986 to 3.7 million lbs. up

from 3.4 million lbs. in 1985. Bar Clam and quahaug, landings and values showed declines in 1986, compared to 1985 statistics.

Seaplant landings decreased by 7.2 million pounds to 31.2 million lbs. for 1986 with a landed value decrease of 18.8% giving a total value of 2.0 million.

The landed Weight and value for fish and seaplants in P.E.I. in 1986 with comparative figures for 1985 are as follows:

P.E.I. FISH LANDINGS AND VALUES
1985-1986

SPECIES	1985		1986*	
Groundfish	**Pounds**	**Value $000**	**Pounds**	**Value $000**
Cod	12,403,578	$1,736.5	9,989,950	$2,497.4
Hake	3,776,570	302.1	3,573,272	321.5
Flounder	6,634,030	1,658.5	3,712,297	1,113.7
Blackbacks	**	**	1,306,220	391.9
Greysole	**	**	9,222	1.8
Yellowtails	**	**	36,772	7.3
Redfish	9,380,830	1,055.3	10,111,909	1,213.4
Halibut	21,509	15.1	20,982	14.7
Haddock	48,139	9.6	20,839	3.1
Pollock	3,000	0.3	6,700	1.3
Tomcod	286,166	28.6	162,875	8.1
Fishmeal	1,592,900	16.9	1,164,490	11.6
TOTAL	**34,246,722**	**$4,822.9**	**30,118,528**	**$5,585.5**
Pelagic				
Tuna	227,130	795.0	72,811	$ 369.2
Mackerel	4,916,340	590.0	10,635,713	1,276.3
Herring	12,929,462	1,292.9	20,538,940	2,053.9
Gaspereaux	616,446	61.6	372,964	37.3
Eels	354,228	283.4	379,065	454.9
Smelts	824,521	494.7	1,111,712	444.7
Silversides	232,954	28.0	39,693	5.9
Salmon	240	1.4	6,376	28.7
Trout	37,000	77.7	20,000	45.0
Animal Feed	141,878	14.2	110,229	11.0
TOTAL	**20,280,199**	**$3,638.9**	**33,287,443**	**$4,726.9**

SPECIES	1985		1986*	
Shellfish	**Pounds**	**Value**	**Pounds**	**Value**
Lobster	15,018,381	33,591.9	18,327,633	44,494.2
Bar Clams	1,401,665	280.3	889,749	177.9
S.S. Clams	858,380	472.1	861,054	473.6
Quahaugs	1,371,321	822.8	629,399	409.1
Ocean Quahaugs	31,000	3.1	--	--
Scallops	246,370	1,416.6	337,974	2,196.8
Mussels	1,022,242	562.2	2,685,100	1,879.6
Oysters	3,403,240	2,041.9	3,706,228	2,223.7
Snow Crab	3,083,524	1,695.9	3,628,858***	2,903.1
Rock Crab	121,528	12.2	369,078	55.4
Whelks	22,418	5.6	--	--
TOTAL	26,580,069	$40,904.6	31,435,071	$54,813.4
TOTAL FISH	81,106,990	$49,366.4	94,838,042	$65,126.1
MARINE PLANTS	38,401,704	$ 2,496.1	31,196,087	$2,027.7
TOTAL FISHERY PRODUCTS	119,508,694	$51,862.5	126,034,129	$67,153.8

* Preliminary

** In 1985, blackbacks, greysole, and yellowtail landings were included under flounder landings.

*** Includes landings by N.B. vessels (P.E.I. Total 2.9 million lbs.)

DEPARTMENT OF FISHERIES

The following table shows the comparisons for P.E.I.'s landings and values, by species, groups, over the period 1970 - 1986.

PRINCE EDWARD ISLAND, 1970-1986
Landings, Quantity and Values by Species
(In thousands of lbs. and thousands of dollars)

		Groundfish	Pelagic & Esturial	Molluscs & Crustaceans	Marine Plants	Seafish Total Excluding Marine Plants	Total
1970	Q.	33,668	54,853	11,837	67,004	100,358	Q.167,360
	V.	1,353	928	7,298	1,558	9,579	V. 11,167
1971	Q.	39,440	47,012	11,047	50,764	97,499	Q.148,263
	V.	1,635	968	6,822	937	9,425	V. 10,361
1972	Q.	37,650	9,711	9,226	30,028	56,587	Q. 86,615
	V.	1,693	522	7,293	581	9,508	V. 10,089
1973	Q.	38,510	14,014	10,325	49,123	62,850	Q.111,973
	V.	2,132	899	8,209	1,172	11,241	V. 12,414
1974	Q.	17,083	9,667	8,830	76,036	35,661	Q.111,617
	V.	1,087	788	6,995	3,106	8,870	V. 11,977
1975	Q.	15,032	5,529	11,352	40,318	31,914	Q. 72,232
	V.	1,058	670	9,078	1,610	10,806	V. 12,416
1976	Q.	14,972	6,998	11,263	28,843	33,233	Q. 62,075
	V.	1,091	1,077	9,673	878	11,841	V. 12,719
1977	Q.	22,454	5,548	11,849	30,116	39,851	Q. 69,967
	V.	2,137	1,156	10,786	1,085	14,078	V. 15,164
1978	Q.	28,248	8,850	15,307	31,709	52,905	Q. 84,614
	V.	3,154	1,605	17,928	1,873	22,697	V. 24,560
1979	Q.	33,995	10,581	16,716	42,943	61,273	Q.104,216
	V.	4,300	1,898	20,259	2,689	26,457	V. 29,146
1980	Q.	42,252	1,238	16,475	35,225	70,966	Q.106,191
	V.	4,672	2,302	18,037	1,781	25,011	V. 26,792
1981	Q.	45,144	14,035	17,568	37,485	76,747	Q.114,231
	V.	5,413	2,309	22,258	1,874	29,982	V. 31,856
1982	Q.	42,223	18,046	18,672	34,043	78,942	Q.112,986
	V.	4,823	2,524	26,379	1,702	33,726	V. 35,428
1983	Q.	45,039	20,736	21,955	28,709	87,730	Q.116,439
	V.	4,883	3,539	34,365	1,435	42,787	V. 44,222
1984	Q.	41,646	15,581	21,579	34,724	78,806	Q.113,585
	V.	4,461	3,262	28,323	1,736	36,046	V. 37,821
1985	Q.	34,247	20,280	26,580	38,402	81,107	Q.119,509
	V.	4,823	3,639	40,905	2,496	49,366	V. 51,863
1986	Q.	30,116	33,287	31,435	31,196	94,838	Q.126,034
	V.	5,586	4,723	54,813	2,028	65,126	V. 67,154

EXTENSION DIVISION

Lewie Creed, Brian Gillis, Friend Herring
Irwin Judson and Rory McLellan

The role of the Extension Division is to keep the fishing industry well informed and to provide feedback from the industry which can be used by the Department to develop sound policies and programs. This work includes information programs, fisheries promotion, assistance to fishermen and their organizations, provision of training and technical upgrading, assistance to the aquaculture industry.

Five staff members have been providing this service to the fishing industry through personal contact in assigned areas of Eastern and Western ports in the Province.

The staff performed a number of activities around the shores including attendance at 55 different ports where numerous meetings and information sessions with fishermen were held. Activities include the organization of these meetings and coordinating the participation of both Federal and Provincial Government Departments, which have impact on the Fishery.

INFORMATION

A number of information programs were organized or continued and carried out by the Extension Division during the year.

Radio Broadcasts

A weekly five minute radio broadcast covering fish prices and markets was produced by the Division during the period May 1 - November 15, 1986. The program was aired on radio stations CFCY, CHTN and CJRW on Saturday evenings.

As a special service to fishermen, the Extension Division sponsored marine weather broadcasts on the three local radio stations during the peak fishing period of April to November. This service is designed to assist fishermen by providing up-to-date weather information which they can use to make decisions on their fishing operations.

Another feature was incorporated and continued in this marine weather coverage again this year by making use of the commercial time at the radio stations to promote Island fish. A series of 22 different radio spots were prepared by the Extension and Production Divisions that were aired during commercial time with the Marine Weather. These ads promoted the fish barbecue program, lobster and sales of other Island fish along with where they could be purchased throughout the Province.

Booth Display

Display booths were placed at major fairs and exhibitions held throughout P.E.I. during the summer months. The purpose of the displays was to increase and promote general awareness of the P.E.I. fishing industry and the role of the Department.

Two summer employees, Des MacDonald and Lisa Bennett were responsible for assembling the display and supervising its operation at the various events. Displays were placed at St. Lawrence Scallop Festival, Tignish Irish Moss Festival, Souris Trade Show, Summerside Lobster Carnival, Northumberland Fisheries Festival, Tyne Valley Oyster Festival, Country Days and Old Home Week, and the Kensington Harvest Festival.

Two events of special note were the St. Lawrence Scallop Festival where staff was involved in judging the scallop shucking competition and the Northumberland Fisheries Festival where the Department again sponsored the scallop shucking and fish filleting competition. This year, retired master fisherman "Buddy" Clifton MacCormack was available to discuss special fisheries topics of interest to booth visitors. His knowledge and experience was very much appreciated at the shows in Summerside , Charlottetown and Kensington.

On March 12th, and 13th, the Fourth Marine Diesel and Electronics Show was held at West Prince Centre, Elmsdale, where the Department assisted Mary Lou Rogers of Holland College to organize more than 30 exhibitors. More than 500 fishermen and people interested in marine equipment attended the show, which included survival rafts and suits, diesel engines, fishing gear, supplies, and fish handling containers. Plans are for an even bigger and better show in 1987.

The Extension Division continued the popular promotion button with the logo "Serve P.E.I. Fish-It's Catching" with 15,000 being distributed at booth displays and other functions during the year.

The Extension Division revised and updated a number of species information pamphlets on lobster, cod, scallop, soft-shell clams, mackerel and smelts.

A fifth printing of brochures providing details on five assistance programs of the Department was carried out. These brochures provided details on eligibility, amount of assistance provided and method of application for the Diesel Engine Conversion Program, Aquaculture Incentive Program, Aquaculture Loan Program, Fresh Fish Market Assistance Program and the Onboard Fish Handling Program. In addition, brochures were prepared and printed dealing with Fishermen's Holding Units, Near and Offshore Fleet Development, Fishermen's Quality Enhancement, Product Utilization and Commercial Fishermen's Investment Incentive.

A number of news releases on projects and programs of the Department were given to local news media and national and international trade journals. Promotional advertisements were also prepared for a number of local, regional and national publications.

TECHNICAL UPGRADING

The Technical Upgrading Program assists the fishing Industry to travel and attend worthwhile functions related to promotion and enhancement of the fishery.

This year the Extension Division coordinated and assisted:

- Representatives from Four Ports Marine to attend Fish Expo in Boston. The Extension branch also assisted in the development of a brochure and other promotion material.
- Dockside grader monitors to take a tour of New England to study American quality measures and standards.
- Representatives of fisheries museums to visit their counterparts in New England.
- 10 Island fishermen to visit Fish Expo and other New England points of interest.

As well, the Division assisted a number of fishermen to attend industry consultative and information meetings.

PORT MAINTENANCE

The Department continued to provide for the minor maintenance and power consumption costs of 116 electrical services located at 53 Island fishing ports or shore sites. These services include wharf lighting systems and electrical outlets as well as water system pumps. This service ensures that adequate lighting and water supplies are maintained and functional for the convenience and safety of all port users.

Through an agreement with Transport Canada, yearly electrical costs at Summerside's Holmans and Queen's Wharves are no longer the responsibility of the Province. At the Port of Souris, the Federal Department will now assume all costs for power consumption and repairs except for seasonal use of 110 volt plugs from April through to the end of November.

In co-operation with the P.E.I. Department of Health and Social Services, the Extension Division helped co-ordinate a program which provided port custodians or night watchmen at most major P.E.I. fishing ports. The custodians were hired by Social Services through their Job Creation Program for social assistance recipients and consisted of both men and women. The port custodians and the program were well received by fishermen. The presence of the night watchmen resulted in an almost total reduction in thefts and vandalism at the ports and supervision of boats, particularly during storm situations, was of great benefit

to fishermen. Work was created for 135 people in 1983, 170 in 1984, 78 people in 1985 and 78 opportunities in 1986.

For approximately 15 years, the Extension personnel of the Department have been assisting fishermen's port committees to plan, apply for and administer job creation projects that produced better conditions at Island ports. The usual developments undertaken through these projects have been construction of fishermen's buildings and new wharf facilities.

In 1986, the Department began action at Lower Bedeque to improve working conditions for oystermen traveling considerable distances and living in small travel trailers. Nearly 4,000 cubic yards of fill and rip rap enlarged a parking area 400' x 100' and basic utilities such as power, light and water were provided. If this facility proves successful, other shore sites will be upgraded.

Other minor port improvements carried out during the year included timber and mechanical work on the shore at St. Peters Bay, fill and grading at both Georgetown and Basin Head, and raising a power line that crossed Grahams Pond.

FISHERMEN'S HOLDING FACILITIES

A Fishermen's Holding Facilities Program or Baitshed Program was reinstated during the fiscal year 1984-85. This program provides 75% of the material costs required to construct new fishermen's holding or storage units. The maximum grant is $1,000 per unit on new construction or $600 per unit for upgrading existing holding units, when feasible. There is a restriction of limiting financial assistance to once only per fisherman.

To-date, financial assistance during the past three fiscal years is reported in the following, expressed as the numbers of bait shed units.

PORT	FISCAL YEAR 84/85	85/86	86/87
Beach Point	2	2	-
French River	1	-	1
Georgetown	-	3	-
Grahams Pond	-	-	1
Higgins Wharf	1	1	2
Launching	1	-	1
Lower Montague	-	-	1
Malpeque	2	5	-
Darnley	1	2	-
Milligans Wharf	-	1	4
Mink River	-	-	1
Naufrage	-	3	2
North Lake	1 + 1 Renov.	-	-
Red Head (Morell)	-	-	1
Rustico Harbour	1	-	-
Souris	-	-	4
Summerside	1	1	-
Victoria	1	-	-
YEARLY TOTALS	12 New Unit +1 Renov.	18	18

Requests continue to be received and at the time of writing, total 24 new and 3 renovations.

ECONOMIC REGIONAL DEVELOPMENT AGREEMENT

In June of 1984, the P.E.I. Department of Fisheries and the Department of Fisheries and Oceans signed a five year $10 million Fisheries Development Sub-Agreement. The terms of the agreement call for $7.5 million in federal development spending over the five years and $2.5 million in new development initiatives by the P.E.I. Department of Fisheries.

The Extension Division provided support services to the Fisheries Management Committee which has been organized to coordinate fisheries programs under E.R.D.A. Membership of the Committee consists of the Area Manager, Department of Fisheries and Oceans, P.E.I., a staff member of the Ministry of state for Economic and Regional Development representing the Federal Government, the Deputy Minister of P.E.I. Department of Fisheries in addition to a representative of Treasury Board representing the Province. The Committee regularly reviews fisheries programming under the Sub-Agreement to ensure programs of both levels of government are complimentary to each other and to ensure effective response to the needs of the fishery.

TECHNOLOGY TRAINING PROGRAM (E.R.D.A.)

The purpose of the Technology Training Program is to ensure that training courses with a major emphasis on quality improvement are provided to the P.E.I. fishing industry.

Through the program, the Department entered a cost shared agreement with Holland College to provide an instructor for fisheries technology courses. The addition of the new staff member, Don Morrissey, allows the fishing/processing sector access on a short course basis to the training developed by Holland College for their two year post-secondary program in Fisheries Technology. It also allows the Department to utilize Mr. Morrissey's expertise in offering short courses and seminars to fish processing employees during the processing season on an in-plant basis.

The Extension Division worked closely with the P.E.I. Department of Industry, Canada Employment and Immigration Commission and Holland College to organize training courses for the fishing industry. During March and April of 1986, approximately 50 students received training in Dockside Grading at courses held in Summerside and Souris. This valuable training provided the graders necessary for carrying out the Fishermen's Quality Enhancement Program.

The Division, in cooperation with the Canada Employment and Immigration Commission, the Department of Industry and Holland College, has arranged a Quality Control Course for processing plant employees and two Dockside Grading Courses for offering in early 1987. During the first quarter of 1986, the following courses were offered under similar cooperative arrangements: Nets and Gear, Fishing Masters 4th Class, Boat Refitting and Repair (2 courses), Quality Control, Retort Operation, Can Scales Maintenance and Dockside Grading (2 courses).

Due to a reduction in funding of fisheries courses by C.E.I.C. of more than 50% for 1986-87, the Division will attempt to offer such courses as Nets and Gear and Fishing Masters 4th Class, on a cost shared basis with fishermen.

FISHERMEN'S QUALITY ENHANCEMENT PROGRAM (E.R.D.A.)

The Fishermen's Quality Enhancement Program was designed to provide an incentive to bonafide P.E.I. fishermen to produce top quality groundfish and thereby realize new market opportunities. The Program provides a bonus of 10% of the value of Grade A groundfish sold to a P.E.I. processor.

The program is available to all P.E.I. groundfish fishermen who voluntarily submit their catches for grading at dockside. Proof of the grade A designation is provided by certified dockside graders employed by the P.E.I. groundfish buyers.

During 1985-86, the first year of this announced three year program, 297 groundfish fishermen received total payments of

$224,746.97 for an average payment of $756.72.

To December 31, 1986, a total of 156 applications were processed during the second year of the program. Total payments to the 156 fishermen were $116,974.89 for an average payment of $749.83.

MAMMAL REMOVAL PROGRAM

The Department assumed responsibility for the removal and disposal of stranded mammals beginning in 1973 and in 1986 five marine mammals, i.e. harbour seals were identified at various shore locations and buried.

Aquaculture

The Department continued its support for the development of aquaculture, particularly mussels and trout. Cultured mussel production continued its rapid increase in 1986 with landings nearly triple those of 1985. Further expansion can be expected in 1987 as the number of seed socks set out in 1986 has increased by 30% over 1985. Landings in 1986 were approximately 1250 tonnes, valued at over $2,000,000.

This industry has become a significant employer on Prince Edward Island as it has employed approximately 130 people in 1986. It is important to note that much of the employment is created during the winter months when cultured mussel harvesting is in full swing and other fishing employment opportunity is low.

The occurrence of a mortality on many of the major mussel farms during August reduced the harvestable crop by approximately 20%. The causes of this summer mortality are unknown, but the support of various agencies in a research effort is anticipated for 1987. The records maintained by the department's mussel meat yield analysis and spatfall prediction project over the past several years will contribute to this effort.

A Symposium on Blue Mussel Culture was held in Charlottetown March 3 - 6, 1986. The symposium was designed as an arena for technology transfer involving local mussel growers and processors, government and research agencies from the Atlantic region and Quebec. Experienced mussel growers and experts were invited from Ireland, Holland, Spain, Italy, Sweden and the United States. A comprehensive record of the proceedings of the symposium , both printed booklet and videotape, was prepared through the support of the Department.

In the emerging trout culture industry the most significant factor in 1986 was the export of certified disease free fingerlings. Three privately owned hatcheries took advantage of a strong demand from New Brunswick and Newfoundland for fingerlings to stock sea cage operations. This demand was strongly influenced by the shortage of salmon smolts for stocking of these farms.

Prospecting for salt water wells, as well as assessment of mixing fresh well water with sea water, has shown encouragement for the development of land based fish farming. Should this become the case, it will allow Prince Edward Island to substantially increase its trout culture industry. As well, a small scale overwintering experiment utilizing fresh water pumped into a plastic-skirted sea cage is showing encouraging results.

In cooperation with the National Research Council, a handbook of trout culture practice on Prince Edward Island has been compiled. The handbook will be useful for handout purposes in response to requests for information by the general public as well as serving as a source book for new and existing growers.

In response to the need for trained aquaculture technicians, Holland College established a 48 week Aquaculture Technology Program. Providing training in skills useful for the fish farmer, the shellfish farmer and the aquaculture technician, the program began with its first class of thirteen students in September at its facilities in Ellerslie. The Atlantic Veterinary College also took in its first class of veterinary students in September. Staff were hired and fish health facilities are near completion. These two educational facilities providing training and research are expected to provide excellent support to the Atlantic aquaculture industry and establish Prince Edward Island as a centre of excellence in aquaculture.

In regard to coastal zone management, several advancements have been made. Construction has progressed on a new bridge that will replace the causeway across West River. This will improve the river for fish and shellfish production, especially oysters, quahaugs and eels. Improved methods of highway crossing construction are evident in other rivers, especially the Red Bridge in Wilmot. Aquaculture received due consideration in the discussions leading to a provincial conservation strategy.

Aquaculture and the shellfish fishery continue to make adjustments to other users of the water. A new trailer parking area with electrical and water services was constructed by the Department in Lower Bedeque. Discussions regarding the need for designation of water areas for aquaculture, and the guidelines and standards by which aquaculture will be permitted, are ongoing.

In November 1985, Canada's federal and provincial First Ministers agreed to build upon Canada's strength in the fisheries sector and recognized commercial aquaculture and species enhancement as important objectives to pursue. Accordingly, the Fisheries Ministers began a process to work towards the establishment of aquaculture agreements to encourage these developments. To build on current efforts, Fisheries Ministers agreed on several aquaculture principles, goals and policies. They agreed to negotiate memoranda of understanding on aquaculture development to establish the framework for federal/provincial in-

volvement in each province. Prince Edward Island is participating in these initiatives.

In cooperation with the Department of Health and Social Services a Job Creation Program was applied in the oyster industry. Three people were employed for ten weeks during the late summer and carried out the following activities: oyster spatfall prediction and collection, spat removal from 1985 collectors for respreading on public beds in Bideford River, relay of 375 pecks of oysters from Gibbs Creek and Cascumpec Bay to Lot 10 River and cleaning of water systems, filters and heat exchangers in the Ellerslie Fisheries Station hatchery. An excellent set of oyster spat was received on collectors set out in Paugh's Creek and Smelt Creek but efforts in Bedeque Bay were not successful.

Taking advantage of the Department of Industry's Provincial Youth Development Program, the Department was instrumental in supplying five students to trout growers and eight students to mussel growers for the purpose of gaining job-experience.

A January workshop bringing together approximately sixty fishermen and helpers, processors, researchers and government personnel discussed the status of the bar clam and ocean quahaug fisheries. With emphasis on hydraulic methods of harvesting, the industry was analyzed in respect to stock management and regulation, licensing, seasons, quotas, limited entry, clam and quahaug biology research needs, artificial culture and enhancement methods, underwater films of deep sea calm harvesting, processing and marketing.

Aquaculture Incentive Program

1986 marked the fifth year of the Aquaculture Incentive Program which was devised with assistance in its design by the Trout Growers Association and Cultured Mussel Growers Association. The form of assistance depended upon whether (a) a mussel operation or (b) a trout operation is being established.

(a) Mussel Growing: A buoy stockpile was established upon which a mussel grower may draw up to 1,000 buoys.

Applications were up sharply in 1986 with the demand for assistance four times that of recent years. Judging by general inquiries and by the number of mussel leases being requested, it is expected that there will be a heavy demand on the program into the future. A total of 5,575 buoys valued at $12,539 were provided to fifteen growers.

A total of 31,375 buoys valued at $74,177 have been provided to 49 growers over the five years the program has been in existence.

(b) Trout Growing: The trout grower submits his proposal for development of his trout operation and indicates

the specialized items for which he desires assistance to a maximum assistance of $2,000. In addition, the grower may be forgiven the costs of up to 500 fingerlings for the first year. Four trout growers received a total of $5,500 in repayable assistance during the year and 2,000 fingerlings valued at $1,840 were provided.

Twenty-four trout growers received a total of $20,773 in repayable assistance as well as 10,000 fingerlings valued at $6,116 in the first five years of the program.

With the exception of fingerlings, the mussel or trout grower is required to repay the value of the assistance plus interest. When the assistance is repaid in full on or before the date of maturity, an incentive grant in the form of a 25% deduction of the capital advance will be allowed.

Aquaculture Loan Program

The Aquaculture Loan Program is available to bonafide mussel and trout growers possessing the necessary leases and licenses as well as at least two years pilot scale experience who wish to scale up to a commercial operation. Initiated in late 1983 to provide confidence in the aquaculture industry to the financial community, the program has supported loans through the Prince Edward Island Lending Authority in the amount of $351,482.

General

The Extension Division was pleased that financial assistance offered to Usen Fisheries Ltd., Souris led to that Company installing fish reduction equipment in time for the 1986 herring season. The Departments Division of Processing and Quality worked with company officials to develop a system to handle offal created during the herring and ground fish seasons.

Virtually all fish waste was trucked from processing plants in Southern Kings Co. to Souris thus relieving problems experienced during the previous several years, where pit burial or agricultural spreading had to be utilized. Hopefully a stronger market for fish meal and better use of the resource by the processing sector will see problems of the past reduced.

Staff of the Extension Division represented the Department on various industry committees including: Federal Provincial Atlantic Fisheries Committee Development and Quality Sub-Committees, the District 8, 7 and 7B1 Scallop Advisory Committees, the District 8, 7 and 7B1 Lobster Advisory Committees, the Seaplants Advisory Committee, the Marine Safety Advisory Committee, the Search and Rescue Committee, and the Ad Hoc Fisheries Training Committee.

Division staff represents the Department on the Atlantic Bluefin Tuna Advisory Committee. This Committee develops management proposals on an annual basis for consideration and approval by the Federal Minister of Fisheries and Oceans.

PRODUCTION AND MARKETING DIVISION

David Younker, Jim Murchison, Barb Harmes,
Barb Pratt

The Production and Marketing Division provides services to the fishing industry in recognizing potential for fish and seafood products and working with the industry toward meeting this demand. As well, product availability is identified and markets are sought which offer adequate returns to the industry. Major objectives of the Division are:

-- To monitor the supply of raw material with particular emphasis on ensuring P.E.I. participation and fair share of quota allocations.
-- To provide a service to the industry in test marketing new products and to encourage the development of an improved fresh fish industry on P.E.I.
-- To provide market intelligence to the industry which can be used to reach informed decisions on markets and product forms best suited to local employment and economic returns.
-- To promote the consumption of fish products both locally and outside the Province.

The Division, in conjunction with the Processing and Quality Division, works with the fishing industry in developing new products for expansion and modernization of processing capability in order to achieve the objective of more added value to the fish products of P.E.I.

A brief description of the programs and projects carried out by the Production and Marketing Division during 1986 follows:

1. Product Utilization (E.R.D.A)and Test Production

These programs were designed to support the marketing function by developing and assisting in projects to evaluate new market opportunities identified within the fishery.

Salt Fish: A request from Island Saltfish Inc. for assistance on a splitting machine was approved by the Department. This machine enabled the Company to purchase fresh fish and split, salt and dry it for marketing in world markets.

Snow Crab: In an effort to assure that P.E.I. gains as much added value from the snow crab that is landed by Island crab fishermen, processors are encouraged to process this crab in Island plants. In this regard, a contract was entered into with Babineau Fisheries Ltd. (Souris) to purchase equipment necessary to produce crab products during the crab season.

Spring Herring: In an effort to seek additional utilization of spring herring in western P.E.I., a contract was made with Tignish Fisheries Co-op whereby a quantity of herring was salted in plastic barrels to test for suitability in the market place. The test will help to determine if this method of processing would be economically feasible for the spring herring resource.

Four Ports Marine: In an effort to assist Four Ports Marine, Morell in the promotion of their new fiberglass fishing vessels, a contract was entered into which enabled the Company to hire two individuals to promote the vessels on P.E.I. Positive reaction was received by Four Ports Marine management and a number of orders have since been received from fishermen for this type of vessel.

Lobster: In an effort to encourage the processing of lobster on Prince Edward Island, United Maritime Fishermen were assisted to diversify their production at North Lake and at Acadian Fishermens Co-op in Egmont Bay.

FRESH FISH MARKET ASSISTANCE

a) Grants

To encourage the availability of fresh fish to local consumers and visitors and to provide further outlets for the fishermen's product, the P.E.I. Department of Fisheries and Labour designed the Fresh Fish Market Assistance Program.

The program provides for 50% of the capital costs of the fresh fish facility and equipment to a maximum grant of $5,000. In 1986, several establishments were assisted, as well, retail outlets which were set up in previous years received further assistance where eligible. To date, 31 new or existing outlets have been assisted under the program.

Also, under this program, efforts were undertaken to encourage fresh fish markets and food stores to present attractive displays on quality fresh fish. The improvement in quality of fresh fish has generally increased consumption. The promotional aspect has also played a major role. Posters, display materials, recipe booklets and other materials were provided to the retailers. As well, technical advice on handling fish was provided.

b) Fresh Fish

Division staff (in cooperation with the Processing and Quality Division) organized a meeting early in the year with all groundfish processors to discuss items and co-ordinate activities in dockside grading, grader monitoring, fresh fillet sales, etc.

c) **Retail Seminar**

A two day seminar for approximately twenty seafood retailers was carried out in cooperation with Holland College. Speakers for the seminar covered a variety of topics pertaining to fresh and frozen seafood, with the emphasis being on fresh fish. The seminar concentrated on seafood quality with additional discussions taking place on seafood retailing, customer service and supply of seafood.

d) **Retail Newsletter**

"The Seafood Bulletin", a quarterly newsletter for seafood retailers on P.E.I. had a distribution list of approximately 60. The newsletter is aimed at keeping the seafood retailers informed of the latest happenings in the fishing industry. Topics discussed included quality control, seafood availability and marketing strategies. Inserts in the newsletter included sample copies of brochures. Additional copies were available as training materials for staff of seafood retail outlets.

TRADE SHOWS

a) **Seafood '86 (Boston, U.S.A.)**

Attendance at Seafood '86 was carried out in Boston, Mass. This show is the largest seafood trade show in North America with seafood companies from around the world participating. Seminars also are a part of the exhibition covering a wide variety of topics on handling and marketing seafood.

b) **Food Pacific (Vancouver, B.C.)**

A representative of the Division participated in the Food Pacific '86 trade show held in Vancouver, B.C. from August 29th to September 2nd. The show was a joint undertaking with the P.E.I. Development Agency who also coordinated other Island participation in this show. The seafood booth included the Atlantic Mussel Growers Corp., who provided samples of Island Blue mussels. As well, a range of other seafood products were displayed with trade leads passed on to Island suppliers.

c) **Fish Expo '86**

A visit was made to Fish Expo '86 in Boston in October in conjunction with the P.E.I. Minister of Fisheries visit. Processors utilizing P.E.I. fish in Maine and Massachusetts were visited in concert with a corresponding study tour being undertaken by the P.E.I. Dockside Graders. These visits enabled Island visitors to see first hand, in the marketplace the results of increased quality efforts on behalf of the industry on P.E.I.

PROMOTION

a) Seafood Barbecues

Out of the Sea and Over the Coals -- A barbecue promotion program was carried out in National, Provincial and private campgrounds from June to September. Two teams of summer students were employed to travel to the campgrounds and conduct demonstrations which concentrated on how to barbecue seafood. During the demonstrations, the staff discussed the value of the Island fishery, the different methods of cooking seafood and the high nutritional value of seafood. Approximately 2,700 people attended the barbecues and had the opportunity to sample the barbecued fish, collect various recipe brochures and ask questions pertaining to P.E.I. seafood.

b) Special Events

In addition to the campground demonstrations, the "Out of the Sea and Over the Coals" staff participated in twenty-two special events. These events ranged from Senior Citizen Days to various fairs and festivals across the Island. At each special event, a brief explanation on preparing seafood was carried out, followed by the distribution of samples of seafood. The fairs and festivals attended included: Northumberland Fisheries Festival, St. Peter's Blueberry Festival, Eastern Kings Marine Show, West Point Lighthouse Festival and Miminegash Days.

c) Test Kitchen

The test kitchen facility served as a base of operations for all summer staff working on promotional activities. As well, the fully equipped kitchen was used when developing and testing recipes and carrying out seafood research. In addition, the kitchen was used when preparing for demonstrations, displays and trade shows. Upon request, the kitchen was also available for use by members of the seafood industry.

d) Seafood Demonstrations

(i) **In-Mall Demonstrations:** During June, July and August, the "Out of the Sea and Over the Coals" staff carried out demonstrations in malls and supermarkets when inclement weather forced the cancellation of barbecues at campgrounds. Steamed mussels, fish chowders, and other seafood was prepared and samples distributed to interested consumers. A variety of recipe brochures were also distributed.

In addition, in-store demonstrations were held throughout the year in response to specific requests.

(ii) **Booth Demonstrations:** A summer employee carried out seafood cooking demonstrations in conjunction with the fisheries booth that the Extension Division placed at major Island fes-

tivals. The eight festivals attended were: St. Lawrence Scallop Festival; Tignish Irish Moss Festival; Eastern Kings Marine Show; Summerside Lobster Carnival; Northumberland Fisheries Festival; Tyne Valley Oyster Festival, Charlottetown Old Home Week and Kensington Harvest Festival. Seafoods demonstrated and sampled included cod burgers, steamed mussels, fish chowder, and crab appetizers. The demonstrations were a major attraction with many people stopping to ask questions, collect recipe brochures and sample the seafood.

(iii) **Canadian Home Economics Association:** In cooperation with the P.E.I. Department of Agriculture, a booth was placed at the annual meeting of the Canadian Home Economics Association, which was held in Charlottetown. Samples of a mussel and potato chowder were available to the Conference delegates.

(iv) **Other Events:** A variety of consumer demonstrations were carried out as requested by groups including community schools and senior citizen clubs. Special displays were set up for events such as the West Isle Marine Show, Crapaud Exhibition, the P.E.I. Tourism Industry Association Annual Meeting, the Hillsborough Rotary Seafood Buffet and the Altantic Plus Dinner. In addition, seafood demonstrations were held for school Home Economics classes, and a seafood display was set up at the Queen Elizabeth Hospital.

e) **Promotional Material**

(i) **Lobster Brochure:** A brochure containing general information on lobster was prepared. "Prince Edward Island Lobster 'How To' Booklet" describes how to buy, store and prepare lobster and features eleven lobster recipes.

(ii) **This Week on P.E.I.:** In cooperation with P.E.I. seafood retailers an attractive, full-colour, two page advertisement was inserted in the "This Week on P.E.I." summer weekly publication. The ad featured a colour photograph of Island seafoods and a listing of the thirty-three participating retail establishments. Approximately 200,000 copies were distributed to tourists.

(iii) **Shelf Markers:** Two sizes of shelf markers with the logo "Serve P.E.I. Fish -- It's Catching" were produced. The white and blue cards are utilized by local retailers for pricing seafood products on display.

(iv) **General:** An assortment of promotional materials, including brochures, posters, hanging mobiles, pins, aprons, and stickers were reprinted and used in an effort to gain increased exposure for seafoods. These materials were distributed in response to numerous requests from retailers, consumers and educators.

f) **Advertising**

Advertisements on the variety and availability of Island seafoods were placed in newspapers and magazines throughout the year and regular consumer articles were inserted in a local paper on a bi-monthly basis.

In conjunction with the Marine Weather placed on Island radio stations by the Extension Division, 30-second commercial spots on seafood were aired. These ads promoted the barbecue program, as well as the various species of fish available on P.E.I.

Through the "Telegraphics Computer Terminals" set up at strategic locations on P.E.I. (i.e. Confederation Centre, Charlottetown Airport), information was made available to the public on the dates for fishing festivals, and locations of barbecue demonstrations.

g) **November Fish and Seafood Month**

For the ninth year November was designated as Fish and Seafood Month in Canada. During this month, special promotions aimed at increasing the awareness and consumption of seafood were carried out by government, retailers and processors. This year, for the first time, the Seafood Advisory Council, a newly formed association of seven major Canadian seafood processors, co-sponsored many of the November Fish and Seafood Month activities. The theme of the 1986 campaign was "Seafood...Better than Ever".

The second annual Celebrity Cooking Contest was organized by the Department of Fisheries to launch the 1986 November Fish and Seafood Month on P.E.I. The contest involved thirteen representatives of media, government and the fishing industry preparing a favorite fish dish. A panel of three judges selected Jacqueline Millar of the "Atlantic Fishermen" trade magazine as the winner.

Advertisements placed during November promoted the consumption of seafood and included a series of radio spots and newspaper advertisements. The radio spots featured helpful hints on using seafood and the newspaper advertisements promoted favorite seafood recipes. A newspaper consumer contest was held with the successful entrant being presented with a fish cookbook.

STATISTICS AND MARKET INFORMATION

A primary purpose of this function is to acquire and make available to the Department and to the industry, detailed and timely statistical information on all segments of the fishery in this Province. During 1986, information was updated in such areas as fish landings and values, seafood production, fish processors and their products, employment levels in fishing and other related topics. As well, publications containing this type of information were prepared and released.

(a) **Fish Price and Market Report**

The compilation of this weekly report involved the collection of information on fish prices and market conditions and was provided to the fishing industry through the Department's radio program and regional newspapers. This data was collected at the end of each week to provide a view of the previous week's prices. A selected number of processing plants on P.E.I. and a number of fishery representatives from other Atlantic Provinces were contacted for fish prices. Maritime fish prices were confirmed through a weekly telex supplied by the Department of Fisheries and Oceans in Halifax. Information on prices and market trends for the Eastern United States was received through the National Marine Service in Boston, Mass.

(b) **Statistical Review**

The Fisheries Statistical Review was compiled to present a historical overview of P.E.I.'s fishing industry. This document consists of fish landings and values by species and by district, average prices received by P.E.I. fishermen, seafood products of each of the Atlantic Provinces, exports, numerous graphs, and other related fishery data. The Review is presently being updated with current statistics.

(c) **Tuna**

This Division annually monitors and analyzes fishermen's catch records to provide a base for future management decisions.

The P.E.I. bluefin fishery has grown from a total of five fish landed in 1967 to a peak of 1,048 fish landed in 1974. The allowable quota for P.E.I. for 1985 and 1986 was 660 fish. In 1985, 221 tuna were landed by P.E.I. fishermen, while in 1986, 74 tuna were caught.

The "tended line fishing method" was introduced to this fishery in 1981. Rod and Reel fishing continued from some ports by those fishermen who charter their fishing boats. Approximately 64 bluefin tuna were landed in 1986 by the tended line fishing method while 10 bluefin were landed by rod and reel.

The average weight of tuna landed in 1986 was 981 lb.., with the largest tuna weighing 1,248 lb. For comparison, in 1985, the largest tuna weighed 1,400 lb., while the average weight of all tuna landed was 1,023 pounds. In 1984, the largest tuna weighed 1,304 lb. with an average weight of 1,007 lb..

The following is a summary of the number of tuna landed by port for the past four years.

Port	1983	1984	1985	1986
Skinners Pond)		-	-	-
Sea Cow Pond)	444	-	7	12
Tignish)		219	95	34
Malpeque	3	-	-	-
North Rustico	22	2	5	-
French River	15	1	1	-
Stanley Bridge	4	-	-	-
Tracadie	2	-	4	-
Savage Harbour	18	1	7	1
Morell	17	7	15	-
Naufrage	61	44	34	4
North Lake	103	46	39	17
Souris	1	-	-	-
Annandale	1	3	2	-
Graham's Pond	10	-	1	-
Beach Point	46	10	4	1
Murray Harbour	42	1	7	5
TOTAL	789	334*	222	74

*Additional landings of 58 by P.E.I. Fishermen in N.S. ports for a total of 392.

Three world records have been established in North Lake with regard to the Bluefin Tuna sports fishery. In 1977, Patricia Kuhnle of New York, broke the 80 lb.test line record for women by landing a 884 lb. tuna. In 1978, Dr. Colette Peras, of Montreal, broke the 130 lb. test line record for women, by landing a 1,170 lb. tuna. In 1985, Dr. Jack Steffey of California, broke the 80 lb. test line record for men, by landing a tuna weighing 1,116 lb..

The Bluefin tuna received a wide range of prices in 1986. As the season progresses, fatter tuna are landed and the demand for this fish usually increases, resulting in higher prices to fishermen. On P.E.I., Bluefin tuna fishermen received $2.00 per pound at the beginning of the season. This price rose to a high of $10.00 per pound by the end of the season. The average price for tuna in 1986 was $5.09 per pound. In 1985, tuna prices ranged from $1.50 - $5.50 per pound.

The week receiving the largest catch of Bluefin tuna on P.E.I. , in 1986 was September 21 - 27 when 15 tuna were landed. In 1985, the week of the largest catch was September 15 - 21 when 57 tuna were landed.

(d) Snow Crab

This Division also monitors Snow (Queen) crab landings throughout the fishing season to provide information on which to base management decisions.

P.E.I. was granted 16 exploratory permits in December of 1984 and a further 14 snow crab exploratory permits were granted in April, 1986. P.E.I. snow crab fishermen operate in two zones, 25 & 26, and fish primarily off the north shore of P.E.I. Area 26, is the larger of the two zones extending into the Gulf of St. Lawrence from North Cape to East Point. In 1985, only P.E.I. fishermen were permitted to fish in these zones. However, in 1986, permission to fish in this exploratory zone was granted to a number of offshore vessels from Quebec and New Brunswick.

Information assembled on snow crab provided an indication of the value of the fishery, where the main fishing areas were located and on the processing of snow crab, both on and off P.E.I.

The Snow Crab fishery is monitored by the Federal Department of Fisheries and Oceans with regard to quality and fishing seasons. This year, on P.E.I., the Snow Crab fishery was open from April 1st to July 9th and from September 11th to November 30th. Weather conditions didn't allow fishermen to fish beyond October 27th. Landings by P.E.I. fishermen in the spring were 2.2 million pounds while 0.7 million pounds were landed in the fall period.

(e) Seafood Products Directory

The Seafood Products Directory was completed during the year. This Directory indicates the seafood products produced by P.E.I.'s Provincially Licensed and Federally Registered Export plants. P.E.I.'s Provincially Licensed Non-Export plants and their seafood products, the major Shellfish Shippers, and harvesting seasons of all species. A glossary of all P.E.I.'s fish species and their scientific names are also included in the directory. This directory is a buyer's guide for seafood produced in the Province and it is distributed locally, nationally, and internationally upon request.

(f) General

The Fishery Statistics Pamphlet was reprinted to reflect annual up-to-date information. This pamphlet is used as a quick guide to research fishery statistical data, and is used in all information packages.

The Bluefin Tuna pamphlet was also reprinted to reflect current information. This pamphlet is distributed to tuna charter establishments, interested processors, school children and in general is used as a reference for numerous requests on this fishery.

(g) **Resource Monitoring**

The Resource Monitoring Program is an Island wide project employing one person in each of the three counties to monitor the commercial landings of a variety of fish species landed. The primary data collected was the length frequencies of fin fish. This monitoring has been carried out by the Department since 1979.

The harvesting of small fish in the Gulf is currently a dominant issue. A good deal of concern has been expressed that the harvesting of small fish will cause a depletion in fish stocks in future years. Information collected on P.E.I. has been provided to the scientists in the Department of Fisheries and Oceans for further analysis.

Table 1: The mean length frequencies and number of mackerel and herring measured from the commercial catch on P.E.I., 1983 - 1986 inclusive.

Fish Species	Number Measured				Mean Length (cm.)			
	1983	1984	1985	1986	1983	1984	1985	1986
Mackerel	1297	5779	3060	9629	33.5	33.2	33.6	34.0
Herring	3294	6600	1957	3553	30.1	28.9	28.7	29.3

The length frequencies of cod have been taken on a variety of gear types, (i.e. 65' draggers, pair seiners, single draggers, gill nets, longline, handline (jig) and offshore draggers) for many years.

From 1982 to 1986 inclusive, the mean length of cod caught by the offshore draggers was 57.6 cm. A comparison of all inshore gear combined for cod, from 1982 to 1986 inclusive, gives a mean length frequency of 54.1 cm. The mean length frequency for inshore cod catches for the past four years is as follows: 1983 - 56.3 cm., 1984 - 53.6 cm., 1985 - 52.6 cm., 1986 - 52.9 cm.

Table 2:

GEAR TYPE	1982	1983	1984	1985	1986
Danish Seine	64.7	67.4	55.4	60.6	61.5
Pair Seine	65.2	62.9	62.5	61.1	63.6
Single Dragger	61.9	63.2	62.5	59.0	58.7
Nets (Head Off)	54.6	56.1	55.6	56.4	58.2
Longline	67.5	71.8	68.5	73.5	71.8

With Redfish being a major species caught by the offshore

draggers, length frequencies have been collected over a number of years. Table 3 below gives the results of that data for redfish from 1980 to 1986 inclusive.

Table 3: Mean length Frequencies of Redfish (cm) and number measured from 1981 - 1986

YEAR	TOTAL MEASURED	MEAN LENGTH
1986	5,928	31.4
1985	1,785	29.2
1984	6,626	31.9
1983	4,363	31.7
1982	5,206	30.9
1981	2,669	30.9

The following species of flat fish: Flounder, Greysole, and Yellowtail were checked for length frequencies at various harbours around P.E.I. during the Resource Monitoring Program. Table 4 gives these results.

Table 4: Flat Fish Species and Mean Length Frequencies in cm. during 1986 with a Comparison with 1985 and 1984.

FISH SPECIES	MEAN LENGTH FREQUENCY (cm)		
	1984	1985	1986
Greysole	31.1	42.4	48.6
Yellowtail	29.0	29.8	30.2
Flounder	37.5	37.1	36.9
Blackbacks	29.5	29.6	28.7

The data collected under this program is useful for market research work and can be used as a guide to indicate the size of fish landed. This program also provides basic information that helps determine the Province's position within the various fisheries management and industry development strategies. Data collected, particularly relating to hake landings, was provided to the D.F.O. Gulf Region Headquarters in Memramcook, New Brunswick.

Other

Information on P.E.I.'s herring fishery was collected this year through a questionnaire which was completed by several fishermen throughout P.E.I. The questionnaire provided information with respect to fishing methods and gear, costs and earnings, handling methods, and any concerns with which they may have with regard to this fishery.

Statistical data such as Resource Monitoring, fish prices

and landings, and Boston groundfish and shellfish prices were applied to the Departments computer. Further statistical data will be applied to the computer in future months to expand the Department's data base.

General

Staff of the Division also represented the Department on a number of species management committees during the year, namely: The Atlantic and the Gulf Groundfish Advisory Committees: Snow Crab Advisory Committee and the Small Pelagics (Herring and Mackerel) Committee. These Committees develop management proposals on an annual basis for consideration and approval by the Federal Minister of Fisheries and Oceans. Provincial representation is of paramount importance in ensuring the interests of the Province is maintained in the context of the negotiation procedure.

Division staff also held membership on the Department of Industry's Small Business Incentives Review Board, the Province's Trade Development Strategy Committee, the FPAFC Working Group studying Enterprise Allocations in the Groundfish fishery, the Canada/France Advisory Committee, the PEI Primary Products Marketing Committee, and as well made presentations at the Tourist Industry Associations annual meeting and the P.E.I. Mussel Symposium.

PROCESSING AND QUALITY DIVISION

Don Judson, Lloyd Murphy, Lynn Wall

The role of the Processing and Quality Division is to increase the availability and utilization of raw material and encourage innovative processing techniques to satisfy market demand and improve fish quality for the consumer. Three personnel act as a resource centre for the fish and seaplant processing sectors. The Division implements the Prince Edward Island Fish Inspection Act and Regulations. It also implements the Processors' Quality Enhancement, Fleet Development, Diesel Engine Conversion and Commercial Fishermen's Investment Incentive Programs. Support is also provided to the processing sector in the preparation of financial packages for new development and loan guarantees.

Activities undertaken during the twelve months ending December 31, 1986 follow:

Fish Inspection Act:

The Prince Edward Island Fish Inspection Act and Regulations give the Province authority to ensure that seafood is purchased, processed and marketed under sanitary conditions.

Each registered non-export facility is routinely examined to determine if plant construction and sanitation regulations are adhered to.

During the 1986 season, 153 fish buying licenses and 45 fish processing licenses were issued.

The Province, through an agreement with the Department of Fisheries and Oceans, utilizes the services of the Inspection Branch to enforce regulations in the Prince Edward Island Fish Inspection Act. A Provincial fishery technician hired in 1985 assists with the monitoring of the regulations with non-export processing plants on the Island.

Due to the increasing trend of unprocessed raw product leaving the Island over the last few years, the Department has increased its activity in the monitoring of fish buyers licenses issued. In the case of canner lobster, the Department encourages any company or individual to have 50% or more of their purchases processed on P.E.I.

During the 1986 fishing season, a number of complaints on fish quality were investigated and recommendations for improvements were suggested. Due to a number of quality improvement programs in place in Prince Edward Island, there has been a noticeable increase in landed fish quality.

Dockside Grading

To continue the Department's thrust of improving the quality of groundfish landed on Prince Edward Island, the Department of Fisheries in cooperation with the Department of Fisheries and Oceans funded the P.E.I. Groundfish Buyers to engage the services of six dockside grading monitors for the 1986 fishing season. The duties of the monitors were to:

(1) monitor the fish grading of industry graders,
(2) deal with any complaints regarding the lack of uniformity in grading,
(3) encourage fishermen to participate in the project,
(4) talk to fishermen regarding the problems they have in meeting the standards and going out in the fishing vessels to monitor handling procedures, and
(5) see that proper records are being maintained and statistics collected on a daily, weekly and monthly basis on all fish offered for grading,

Over thirty industry dockside graders were engaged during the 1986 fishing season. By year end over ten million pounds of fish were offered for grading on Prince Edward Island with the following results:

	Grade A(%)	Grade B(%)	Grade C(%)
Flounder	3,796,170(80.45)	908,003(19.21)	13,449(0.28)
Hake	1,518,937(70.76)	621,630(28.96)	5,369(0.25)
Cod	2,735,066(77.8)	749,111(21.3)	28,115(0.80)

It has been recognized that a change in handling practice, both on board vessel and at dockside, has proved to be the major significant factor for increased Grade A landed fish. The majority of fishermen and processors have switched to insulated containers. Fish are gutted/bled, washed immediately on board and then stored in insulated containers in slush water, made from seawater, ice and salt.

Dockside grading courses were held in March for all industry graders.

The Department will hold more grading courses in 1987, as well as one day fish quality seminars for interested fishermen in 15 separate communities throughout the Island.

Processors Quality Improvement Program (E.R.D.A.)

During the 1986 season, 15 federally registered processing plants on Prince Edward Island participated in the Processors Quality Improvement Program. Under this program, financial assistance was available on a 50/50 cost shared arrangement to registered plants on Prince Edward Island licensed to export. The funds were used to purchase infrastructure materials at the

plants aimed towards improving fish quality. The infrastructure included items from insulated fish boxes to chilled brine tanks for groundfish fillets.

Plants that received assistance under the program are as follows:

1. Wendell Graham (1981) Ltd.
2. North Shore Packing Co. (1984) Ltd.
3. Acadian Fishermen's Co-op Assoc. Ltd.
4. Alberton Fisheries Ltd.
5. Polar Seafoods Ltd.
6. Summerside Sea Products
7. Beach Point Fishermen's Coop
8. Keeping and MacKay Ltd.
9. Tignish Fishermen's Coop Assn. Ltd.
10. North Ocean Enterprises Ltd.
11. International Seafoods Ltd.
12. Abegweit Seafoods Ltd./Milligan's Fisheries Ltd.
13. Murray Harbour Seafoods Ltd.
14. Howard's Cove Seafoods
15. Babineau Fisheries Ltd.

Technology Improvement

This program provides financial assistance to Island processing firms for leasing particular machinery on a trial basis to assess the economic benefits to their operation.

(i) The herring fishery is a glut fishery i.e. large volumes of herring are landed in a very short period of time. To assure that the best possible quality of fish is maintained, fast unloading is essential. The traditional method to unload is to fork, shovel or scoop herring into a bucket unloader system. This method, although faster than the box and hoist method, is not quality oriented.

Murray Harbour Seafoods in an effort to speed the unloading of their herring boats and at the same time maintain the quality, leased a TEMCO Wet Pump System through the Technology Improvement program. In this system the pens of fish onboard are flooded with water and the suction pipe is placed in the mass. The fish go up the pipe to a dewatering tank, into a hopper, are weighed and dumped onto a conveyer which directs the herring into plastic boxes. The herring are iced in the boxes and are ready for transport to the plant for processing.

(ii) Summerside Sea Products and North Ocean Enterprises applied under the Technology Improvement Program to each lease, an IBM Compatible Zenith 241 AT computer to assess the efficiency and suitability in their operations. These machines were leased for a three month trial period and in both cases proved to be very beneficial to the operations and in both cases, the machines were purchased after the

lease agreement was terminated.

(iii) Tignish Fisheries Coop Ass'n. Ltd. in an effort to get into a new product line, specifically whole cooked lobster in the shell and lobster and crab meat packaged in a vacuum plastic sealed container, leased a Trigon intact vacuum-skin packager for a three month trial period. The advantage of this system was to extend the shelf life of the product since the film is oxygen - permeable allowing the fish to maintain the natural color. The vacuum skin packaging also assures intimate contact of film to product which prevents ice build up. A third advantage is that a puncture in the film does not mean a vacuum loss throughout the whole area but rather only the small spot where the puncture occurred.

Professional Services

Assistance is available to all Island processing plants enabling them to engage professionals to assess, demonstrate or instruct in processing methods and techniques. Funds are available on a cost shared basis and could include in-plant quality control mechanisms, production analysis, end-of-line grading, etc.

(a) Island Saltfish Inc. was assisted to engage the services of John Coulton, a salt fish processing professional, during 1986, to provide technical assistance in their plant at Desable. During the year, the duties of Mr. Coulton included:

(1) Training: Train fishermen packers and plant workers as to proper methods of splitting, salting, sizing and grading groundfish.
(2) In-Plant Quality Control: This relates to work performed in the new processing facility with regard to production, work flow, end product grade, etc.
(3) Marketing Intelligence: Supplying market intelligence to ISI in the area of changing world market trends in salt fish products.

(b) In 1986, some of Murray Harbour Seafoods fishermen obtained snow crab fishing permits. Rather than sell the live crab to out of province plants for further processing, Murray Harbour Seafoods decided to process the crab in their plant at Murray Harbour. Since the process was new to the employees, Murray Harbour Seafoods utilized the Professional services program to engage the services of Mr. Emile A. Gionet for a ten week period to demonstrate and instruct techniques for extracting meat from queen crab.

(c) Over the last 3 to 4 years, a great deal of work has been carried out and programs have been implemented to improve the landed quality of groundfish. Fishermen on the Island are basically using two systems i.e. dry ice and slush ice. A third type called the champagne system has been introduced by one fisherman. A study was conducted to assess the value of the three systems. The study recommended that slush ice in insulated

containers be encouraged to b
champagne system was not rec
for the in-shore fishery.

e used on our in-shore vessels. The
ommended to be a proven safe system

(d) A project was carri
tigate and observe the curre
of herring in the Atlantic
Research was engaged to co
quality and recommend possib
tests were done at Wendell Gr

ed out in the fall of 1986 to inves-
nt harvesting and processing methods
egion. Minh Dieu Huynh from B. C.
nduct tests to determine product
le methods of improvement. These
aham Ltd., Gaspereaux.

Recommendations:

1. Improve the method
cidences of rupture
processors should f
freezing the whole
lessen the roe dama
2. Sex sorting machine
males from male her
process provides ad
herring for other u
the amount of fish
selected as a means
3. Good freezing metho
sideration. Quick
minimize the freezi
developing freeze r
as sponginess.
4. Improve the handlin
plant to retain top
quality should be u
better dollar retur

of roe extraction to minimize in-
or damage to the roe. Atlantic
ollow B.C. industry method of
fish prior to roe extraction to
ge.
s should be used to separate fe-
ring prior to processing. This
vantages in recovering male
ses, at the same time reducing
to be frozen, if freezing is
of egg firming.
ds should be given serious con-
freezing methods such as IQF can
ng time and prevent the roe from
elated quality problems such
g procedures both on-board and in-
quality. Herring carcasses of good
ilized to make other products for
n to the industry.

In-Plant Training

- The processing Technician
industry on a number of in-
jointly with Holland College
for the following courses:
  - Quality Control Prog
  - Fishermens Quality
  Manual which will b
  at the course.)
  - Salt Fish processing
  - In-plant fish quality

worked closely with the processing
plant training programs. Working
personnel, materials were developed
ramming Part II
wareness Seminars (including a
given each fishermen in attendance
y improvement sessions

These courses were co-ins
College Personnel.

tructed in conjunction with Holland

- Slide shows and scrip
Processing", "Herring Roe Prod
Production". These material
personnel in these areas.

ts were prepared on "Salt Fish
uction", and "Groundfish Filleting-
will be used for training plant

- "In-Plant Quality Sessions" were made available to Island Plants with materials developed to suit each firms individual requirements.

Financial Support:

Fish processors, seaplant operators, fishermen and service industries; e.g. boat builders, are assisted in a number of aspects related to financial matters that will lead to the development of their respective enterprises. These aspects include applications for development grants, capital or operating loans, and loan guarantees. Financial monitoring was carried out on a number of assistance projects.

Fleet Development

The fishing economy of Prince Edward Island is highly dependent upon the annual volume of raw material (fish landings) available to Prince Edward Island processing plants. It is in the Province's best interest to increase this volume where possible and to ensure that all fish catches are landed using quality methods. In order to do this, fishermen must have modern, seaworthy boats capable of using current harvesting techniques in a most efficient manner. The Department has a fleet development program in place to provide financial incentives to fishermen to convert existing vessels to diesel power and to develop and expand the near and offshore fleet. The report on each segment of the program follows.

Diesel Engine Conversion Program

Diesel engines are more fuel efficient than gasoline models, maintenance is minimal, and the operating life of a diesel engine is much longer than that of a gasoline engine. The diesel engine is more reliable and dependable under arduous conditions. Although the initial investment for a diesel engine is somewhat higher than for a gasoline engine, the savings realized from using less fuel (up to 50% less) would pay for the difference in a very short time. To assist fishermen with the initial cost of conversion from gasoline to diesel engines, the Department provided a grant of 25% of the capital cost to a maximum of $2,500 for new diesel engines installed in existing vessels powered by gasoline engines for at least one fishing season. The program was initiated on April 1, 1982 and provided for retroactive applications back to November 15, 1979, those being approved at $1,500 and $500 for the year to November 15, 1981 and to November 15, 1980 respectively. The program came to a close on September 11, 1986, with no applications being accepted after that date. The applications on hand at that time will be honored over the coming year.

The total number of fishermen receiving financial assistance on new diesel engines up to December 31, 1986 was 346. Eighty-four fishermen received assistance to December 31, 1982; 49 in 1983; 47 in 1984; 96 in 1985 and 70 in 1986. As of December 31,

1986, 29 applications are on hand that will be honored. The 70 fishermen assisted in 1986 received a total of $171,205.30 for an average assistance of $2,445.79.

Near and Offshore Fleet Development Program

The Department has been actively assessing alternate methods of increasing the overall annual volume of raw materials landed on Prince Edward Island. A number of hatched decked 30 gross registered ton vessels operated by P.E.I. fishermen can be engaged in the ground and crab fisheries in the Gulf Region, based on existing licenses. Options appear to be construction of near-shore vessels by fishermen who now have the required licenses and the acquisition of new or used medium or large offshore vessels which also have the required licenses.

A policy respecting the level of financial assistance provides Island fishermen with a grant of 25% of the capital cost to a maximum of $35,000 for new near-shore vessels.

Two fishermen received assistance in 1983/84 and four in the 1984/85 fiscal years. In the 1985/86 year, five fishermen received assistance, a Souris man constructed a crabber/dragger, a Beach Point fisherman constructed a wooden longliner and three fishermen from the Tignish area constructed two crabbers and a Danish Seiner. Five approvals were given for 1986/87 and as at December 31, 1986, three were constructed. A Montague area fisherman constructed a ramp stern dragger and two Launching and Murray River fishermen constructed crab vessels. Two Souris fishermen have two seiners 50% complete with construction to be finished by March 1987. A total of sixteen vessels have been assisted to-date. Seventeen applications are on hand pending program funding becoming available.

These hatched decked vessels of over 30 GRT are suitable to several types of groundfishing and are also a safe platform from which to operate in the new crab fishery. A number of these vessel owners are in various stages of identifying the best on board fish handling and holding methods, and one has installed a chilled seawater/refrigeration system in the fish hold.

Seaweed Stabilization Program:

The mixed moss (Irish Moss/Furcellaria mixture) industry in Eastern Kings County has traditionally been highly dependent upon one market outlet. The main buyer, P.E.I. Seaweed Ltd., was experiencing reduced demand for the processed product and desired to reduce the inventory holdings over a reasonable period of time. The Department, in the interest of stabilizing the harvest of this portion of the seaplants industry, began assisting the fishermen in Kings County in 1981. Initially assistance was provided to reduce the cost of inventory holding charges, however, in 1984 and 1985, good quality mixed moss was bought by the Province of Prince Edward Island and held as inventory until sold to European or United States buyers.

The owners of P.E.I. Seaweed Ltd. were again unable to operate the buying and drying facilities for the 1986 harvesting season citing high inventory costs and little or no demand for processed product. Similar arrangements were being made between the Province and P.E.I. Seaweed Ltd. for the 1986 season as for the several previous years when the operation was sold to Acadian Seaplants of Dartmouth, N.S. The Province leased the facilities from P.E.I. Seaweed Ltd. for May and for the three months ending August 30 from Acadian Seaplants Ltd. and managed the operation normally. The Province provided operating funds and purchased the mixed moss direct from the fishermen, processed and stored it ready for sale.

Acadian Seaplants Ltd., as new owners, took over actual operation of the facilities in late August 1986. The Province ceased its operations at Naufrage and North Lake at that time with Acadian Seaplants Ltd. continuing to purchase and process mixed moss until closing time in late fall.

During 1986, the Department initiated trials directed to upgrading the quality of mixed moss in inventory to make it more marketable. The mix, depending on the time of year that it is harvested, can range from an average 85% Chondrus and 15% Furcellaria to 60% Chondrus and 40% Furcellaria. Using a Kipp-Kelly specific gravity separator on site and modified associated equipment, attempts were made to separate the two types of seaplants to pure Chondrus and Furcellaria. The market is becoming more discerning with respect to consistent product quality and prefer freedom from foreign seaplants. An engineer familiar with operating the machinery used in seaplant processing was engaged for a three month period ending in late August. He worked with existing employees to carry out trials utilizing existing 1984 mixed moss inventory. These trials were successful in determining that Chondrus, with a large percentage of Furcellaria in it, could be separated to 80% Chondrus/20% Furcellaria and almost pure Furcellaria. A portion of the output would remain as a mix or would need to be passed over the separator the second time. Acadian seaplants Ltd. cooperated with the Department during the trials and continued their interest by separating a portion of their fall purchases.

The 1984, 1985 and spring of 1986 production is held in inventory pending finalization of marketing details. Samples of inventory including sun-dried baled, mechanically dried bagged and separated fractions, have been forwarded to a number of potential buyers with several showing definite interest in the unseparated mixture.

Fishermen's Investment Incentive Program:

Fishermen had long pressed for preferential interest rates for monies that they must invest directly into their fishing enterprises. They maintain that direct financial grants usually put individual fishermen in a position of increasing their debt

load for capital items at inappropriate times. The Department put the Investment Incentive Program in place to provide assistance to the primary fishing industry, as it enables individual fishermen to develop their enterprises in an orderly manner and retain a balanced financial business package. Assistance is provided in the form of up to a four percentage point interest reduction grant paid directly to the fisherman upon receipt from a recognized lending institution of itemized charges related to approved projects. Eligible projects can include new or used capital asset purchases, acquisition of fishing enterprises and fishing privileges, repairs to capital items and working capital loans. The interest rebate assistance is paid on an approved loan maximum of $30,000 for a maximum of five years. More than one loan can make up the total aggregate of $30,000.

The Program came into effect May 24, 1983 and of 612 applications, 513 have been approved to-date. During the calendar year of December 31, 1986, 196 applications were received, and 155 were approved. The following table provides statistical data on program operation by calendar year and the program totals to-date:

Calendar Year	# App. Rec'd.	# App. Appv'd	Loan Base Amt. Approved	Average Loan
1983	63	47	397,415.77	8,455.65
1984	158	129	1,898,532.69	14,832.29
1985	195	182	2,913,093.96	16,094.44
1986	196	155	2,604,436.50	16,802.82
TOTAL	612	513	7,813,478.92	15,230.95

Fishermen's initial claims average one year following loan approval, as the Investment Incentive Program pays claims when the interest payments have been made to the lender. Additional claims are made annually until the loan is retired or the five year maximum is reached. Following are details of claims paid:

Calendar Year	# Claims Paid	Total Paid	Average Claim Payment
1984	98	15,587.90	159.06
1985	319	92,610.17	290.31
1986	372	164,661.03	442.64
TOTAL	789	272,859.10	345.82

APPENDIX 1

DEPARTMENT OF FISHERIES

P.E.I. LOBSTER LANDINGS AND VALUES

(1920 - 1986)

V = Values in ($000's)
Q = Quantity in millions lbs.

	Q	V		Q	V
1920	8.3	703.9	1950	9.9	1,963.0
1921	6.4	255.3	1951	8.3	1,702.0
1922	8.8	651.4	1952	8.4	1,849.0
1923	9.7	878.8	1953	7.0	1,997.0
1924	6.5	564.8	1954	7.4	1,977.0
1925	7.9	661.1	1955	8.3	2,324.0
1926	6.6	601.8	1956	9.7	2,725.8
1927	6.3	617.1	1957	8.5	2,456.3
1928	6.6	553.1	1958	8.0	2,510.2
1929	7.4	621.5	1959	8.4	2,843.2
AVG. 20's	7.5	610.9	AVG. 50's	8.3	2,236.8
1930	8.1	539.7	1960	10.1	3,212.3
1931	9.4	553.7	1961	9.5	3,055.0
1932	11.5	551.7	1962	8.7	3,218.9
1933	9.2	396.2	1963	7.4	3,155.8
1934	7.7	536.0	1964	7.8	4,210.8
1935	6.4	467.8	1965	8.8	5,176.6
1936	6.0	544.4	1966	7.9	3,925.7
1937	5.8	524.8	1967	9.0	5,228.8
1938	7.1	458.8	1968	8.7	5,328.9
1939	7.0	464.4	1969	8.2	5,375.8
AVG. 30's	7.8	503.8	AVG. 60's	8.6	4,188.9
1940	5.6	353.9	1970	8.7	6,231.2
1941	6.0	469.2	1971	8.2	5,860.6
1942	6.4	694.8	1972	7.3	6,360.8
1943	6.0	999.9	1973	7.7	7,503.2
1944	6.6	1,149.7	1974	6.2	6,347.0
1945	8.1	1,503.6	1975	8.6	8,135.5
1946	7.9	1,982.7	1976	8.5	8,510.5
1947	6.2	1,070.0	1977	9.1	10,012.0
1948	6.5	1,411.9	1978	11.1	16,648.6
1949	6.8	1,388.4	1979	11.8	18,073.9
AVG. 40's	6.6	1,102.4	AVG. 70's	8.7	9,368.3
1980	11.8	15,458.0	1983	15.5	29,056.1
1981	11.9	18,519.0	1984	13.6	23,137.0
1982	12.2	22,599.0	1985	15.0	33,591.0
			1986	18.3	44,494.2

APPENDIX 2

GENERAL FACTS

Total No. of P.E.I. Fishermen and Helpers (approx.)	3,719
Total No. of Bonafide Fishermen*	1,375
Total No. of Commercial Fishermen**	2,344
Total No. of Vessels - Inshore	1,455
- Offshore	6
Licenses by Species:	
Groundfish	931
Herring	860
Mackerel	1,036
Tuna	351
Scallops	394
Lobster	1,300
Gaspereaux	667
Eels	264
Silversides	29
Total No. of Employees in Processing Plants	
Minimum	850
Maximum	2,000
Total No. of Provincially Licensed and Federally Registered Export Plants (not including buying stations)	32
Total No. of Provincially Licensed Non-Export Plants	10
Total No. of Major Shellfish Shippers	10

*Bonafide Fishermen is a fisherman that is registered as a commercial fisherman, and is the holder of a limited fishery license, and as well meets one of the following conditions:
(1) is the holder of a Category A lobster license;
(2) is able to show proof that 75 percent or more of his income was derived from his previous year's fishing; or
(3) can show proof of sales of fish of a landed value in excess of $15,000.

** Commercial Fishermen is a person 16 years or older that has participated in commercial fisheries and is registered with the Department of Fisheries and Oceans as a Commercial Fisherman. Commercial Fishermen are categorized as A) bonafide, B) full-time, or C) part-time.

ORGANIZATIONAL CHART

APPENDIX 3